Recombinant HIV1 GP120 Protein (Thr30-Arg513) (Group M, Subtype B, Isolate MN), His-tagged

Cat. No. GP120-718H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant HIV1 (Immunodeficiency Virus 1) GP120 Protein (Group M, Subtype B, Isolate MN) (AAC31819.1) (Thr30-Arg513) was produced by HEK293 Cells expression system. This protein was expressed with a polyhistidine tag at the C-terminus.
Species	HIV
Source	HEK293
ProteinLength	Thr30-Arg513
Description	The HIV-1 gp120 envelope protein, a glycoprotein that is part of the outer layer of the virus, which is an essential component in the multi-tiered viral entry process. It presents itself as viral membrane spikes consisting of 3 molecules of gp120 linked together and anchored to the membrane by gp41 protein. Gp120 is essential for viral infection as it facilitates HIV entry into the host cell and this is its best-known and most researched role in HIV infection. However, it is becoming increasingly evident that gp12 might also be facilitating viral persistence and continuing HIV infection by influencing the T cell immune response to the virus. The surface protein gp120 attaches the virus to the host lymphoid cell by binding to the primary receptor CD4. Gp120 binding to its receptor CD4 and co-receptor, CXCR4 or CCR5 is required for fusion of viral and cellular membranes. Several mechanisms might be involved in this process of which gp120 binding to the CD4 receptor of T cells is the best known and

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	most important interaction as it facilitates viral entry into the CD4+ cells and their depletion, a hallmark of the HIV infection. Gp120 is shed from the viral membrane and accumulates in lymphoid tissues in significant amounts. Despite the overall genetic heterogeneity of the gp120 glycoprotein, the conserved CD4 binding site provides an attractive antiviral target. Interaction between gp120 and ITGA4/ITGB7 would allow the virus to enter GALT early in the infection, infecting and killing most of GALT's resting CD4+ T-cells. This T-cell depletion is believed to be the major insult to the host immune system leading to AIDS.
Predicted N Terminal	Thr30
Form	Lyophilized from sterile PBS, pH 7.4. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization.
Molecular Mass	The recombinant HIV1(group M, subtype B, isolate MN) Envelope glycoprotein gp160 Protein(gp120 subunit) consists of 495 amino acids and predicts a molecular mass of 55.8 kDa.
Endotoxin	< 1.0 EU per μg protein as determined by the LAL method.
Purity	> 95 % as determined by SDS-PAGE.
Stability	Samples are stable for up to twelve months from date of receipt at -70 centigrade.
Storage	Store it under sterile conditions at -20 centigrade to -80 centigrade. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Reconstitution	It is recommended that sterile water be added to the vial to prepare a stock solution of 0.2 mg/ml. Centrifuge the vial at 4℃ before opening to recover the entire contents.

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Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

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